

# **ARTICLE NINE LANDSCAPING, BUFFER, AND TREE PROTECTION REQUIREMENTS**

## **SECTION A: INTENT AND PURPOSE**

**9.a.1. Intent:** Regulations for landscaping and tree protection are necessary in order to preserve and enhance the visual image of the city, and promote the safety and general welfare of its residents. More specifically, the intent of the landscape ordinance is to:

- a. Provide landscape buffering between land uses.
- b. Protect, preserve, and promote aesthetic appeal and scenic beauty, and enhance property values.
- c. Reduce noise impacts and air pollution, absorb carbon dioxide, provide shade and reduce the heat island effect.
- d. Reduce storm water run-off, control soil erosion and reduce the hazard of flooding.
- e. Filter and reduce glare from artificial light sources, and screen noise and dust.
- f. Provide shaded areas along streets and in parking areas.

## **9.a.2. Applicability**

- a. Exemptions: The following shall be exempt from these regulations:
  1. Single- family detached dwellings, two-family dwellings, and semi-attached dwellings on their own lots.
- b. Applicable Areas:
  1. All land uses requiring site plan or subdivision approval (major and minor); Additions requiring major or minor site plan review
  2. New residential subdivisions (major and minor);
  3. All land use requests which require a special exception or conditional use approval, as applicable.

## SECTION B: LANDSCAPING AND BUFFER REQUIREMENTS

### 9.b.1. Landscaping Requirements

#### a. Required Planting Areas

1. Street landscaping
2. Parking lots
3. Side and rear yards (Referred to as Type A, B, C, and D landscaping).

#### b. Planting Area Descriptions

1. **Street Landscaping.** A planting area parallel to a public street designed to provide a continuity of vegetation along the right-of-way and a pleasing view from the road.
2. **Parking Lot Landscaping.** The landscaping area within and adjacent to parking areas designed to shade and improve the attractiveness of parking lots and paved areas.
3. **Type A Landscaping.** A peripheral planting strip intended to separate uses, provide vegetation in densely-developed areas and enhance the appearance of individual properties.
4. **Type B Landscaping.** A low-density screen intended to partially block visual contact between uses and create spatial separation.
5. **Type C Landscaping.** A medium-density screen intended to partially block visual contact between uses and create spatial separation.
6. **Type D Landscaping.** A high-density screen intended to substantially block visual contact between adjacent uses and create spatial separation. Type D Landscaping screens views and noise which would otherwise negatively impact adjacent land uses.

**9.b.2. Landscaping Determination:** Requirements for landscaping yards shall be based on the existing land use of the adjacent parcel(s). The type of landscaping yard required for each zoning classification is outlined in Table 9-1.

#### a. Landscaping Determination and Calculation.

1. To determine the landscaping required in this Article, take the following steps:
  - a. Identify the actual use of the proposed or expanded land use and the existing

adjacent land use(s). The use on a property supersedes the actual zoning district. For example, a residence on a General Commercial (GC) zoned property is always considered a residential use.

- b. Use the Landscaping Chart, Table 9-1, to determine the appropriate letter designation for each landscaping area.
- c. Match the letter designation obtained from the Landscaping Chart with the Landscaping Type Depictions in Section 9.b.4. to determine the types and numbers of shrubs and trees required.

<b>Table 9-1 Landscaping Chart</b>						
<b>Proposed Use</b>	<b>Existing Adjacent Use</b>					
	<b>Agricultural/ Vacant</b>	<b>Residential</b>	<b>Office</b>	<b>Commercial</b>	<b>Light Industrial</b>	<b>Heavy Industrial</b>
<b>Residential<sup>1,2</sup></b>	n/a	n/a	B	C	C	D
<b>Office/Institutional</b>	A	B	A	B	C	D
<b>Commercial</b>	A	C	B	A	B	D
<b>Light Industrial</b>	B	C	C	B	B	D
<b>Heavy Industrial</b>	D	D	D	D	D	D

**NOTES:**

- 1. Multifamily housing projects, apartment complexes, and mobile home parks shall be considered a Commercial use for the purposes of this table.
- 2. For any residential single-family subdivision, Planning Commission may require additional landscaping and buffering to mitigate the impacts of the development on adjacent uses.

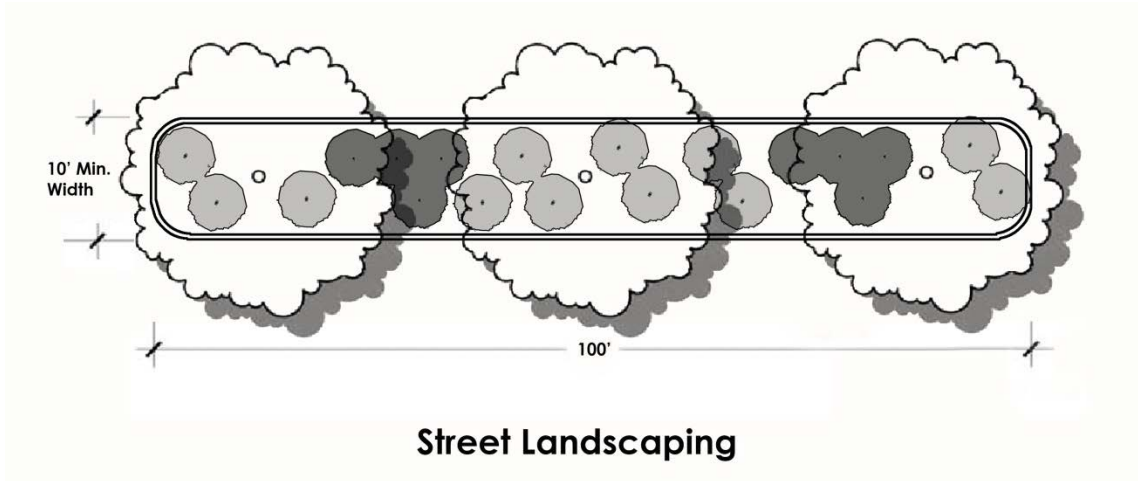
**9.b.3. Responsibility for Bufferyard Installation**

- a. It shall be the responsibility of the proposed use to provide the bufferyard required by Table 9-1.
- b. When a use is the first to develop on two adjacent vacant parcels, the first use shall provide the buffer specified for vacant land. The second use to develop shall, at the time it develops, provide all additional plant material and/or land necessary to provide the total required bufferyard.
- c.

### 9.b.4. Landscaping Type Depictions

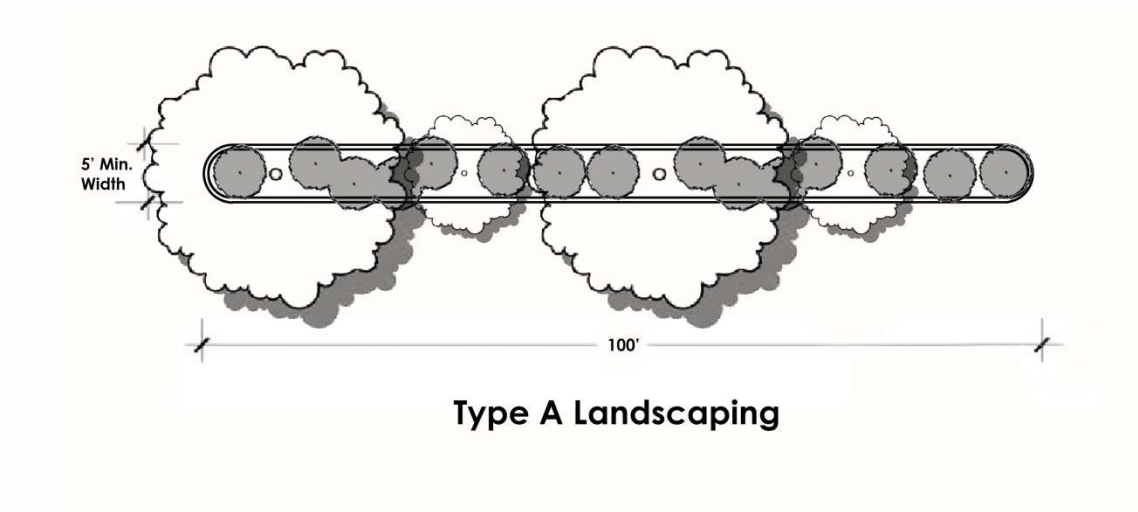
**a. Street Landscaping** (NOTE: Subdivision Street Landscaping Requirements are found in Section 9.c.6.)

*Buffer width:* 10 foot minimum buffer width  
*Plantings:* 3 Canopy trees per 100 linear feet  
20 Shrubs per 100 linear feet



### b. Type A Landscaping

*Buffer width:* 5 foot minimum buffer width  
*Plantings:* 2 Canopy and 2 Understory trees per 100 linear feet  
15 Shrubs per 100 linear feet



**c. Type B Landscaping**

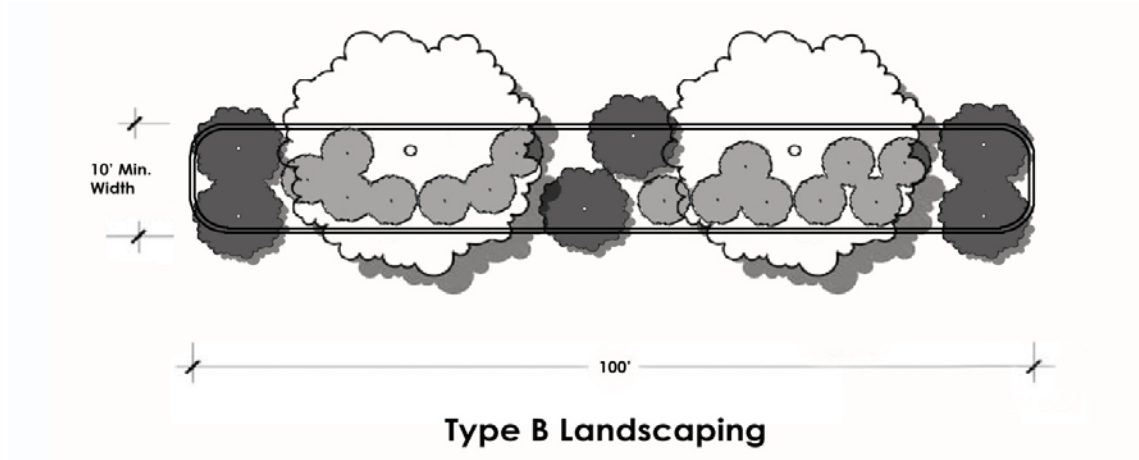
*Buffer width:* 10 foot minimum buffer width

*Plantings:* 2 Canopy trees per 100 linear feet on center

6 Evergreen trees per 100 linear feet on center

15 Tall shrubs per 100 linear feet on center

*Fencing:* Walls and fences, a minimum of 5 feet in height (constructed of masonry, stone, pressure treated lumber, or composite material) may be used to reduce the widths of landscaping by 5 feet.



**d. Type C Landscaping**

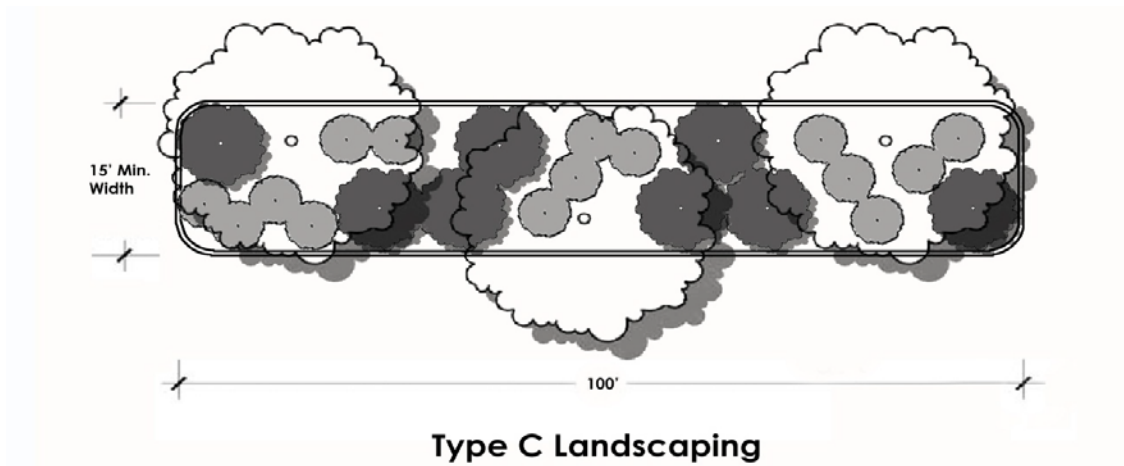
*Buffer width:* 15 foot minimum buffer width

*Plantings:* 3 Canopy trees per 100 feet on center

8 Evergreen trees per 100 feet on center

15 Tall shrubs per 100 feet on center

*Fencing:* Walls and fences, a minimum of 5 feet in height (constructed of masonry, stone, pressure treated lumber, or composite material) may be used to reduce the widths of landscaping by 5 feet



### e. Type D Landscaping

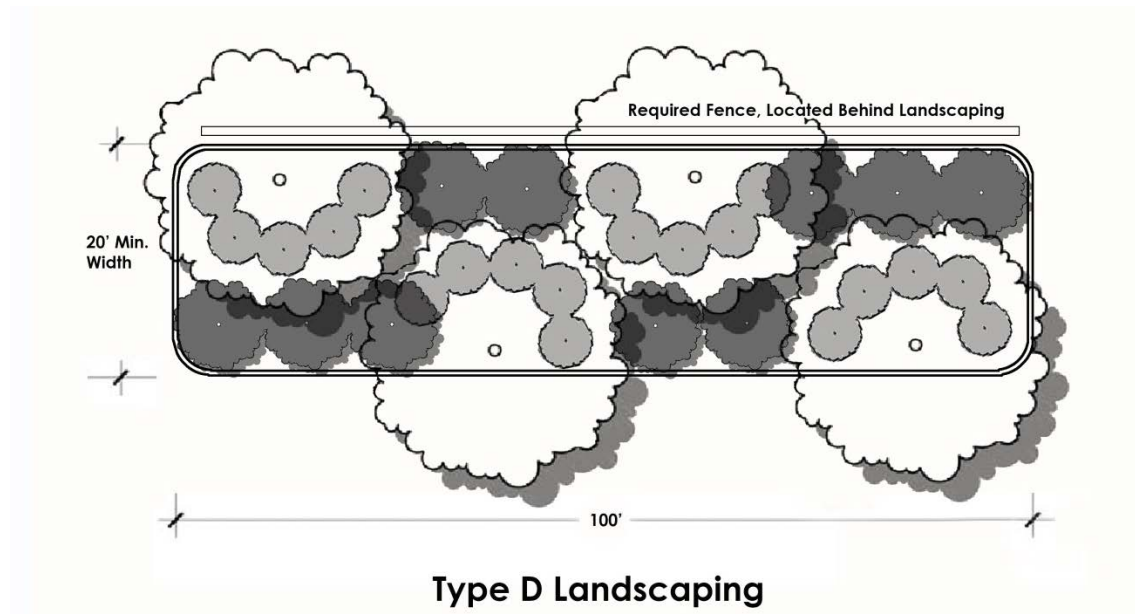
*Buffer width:* 20 foot minimum buffer width

*Plantings:* 4 Canopy trees per 100 linear feet on center

10 Evergreen trees per 100 linear feet on center

20 Tall shrubs per 100 linear feet on center

*Fencing:* Required of a type described in Type B and Type C and must be located with the landscaping in front.



**9.b.5. Utility Service:** When the configuration of a site is such that the required landscaping set forth herein has to be placed in proximity to utility services, consideration shall be given to the estimated mature height of required plant materials, as well as root structure.

- a. Understory trees which have an estimated mature height less than that of the overhead utility service may be substituted on a 2:1 ratio for canopy trees.

## SECTION C: LANDSCAPING DESIGN STANDARDS

### 9.c.1. Landscaping Design Standards

- a. Calculation of Street Landscaping: Street landscaping rate and width calculations shall be based on gross linear footage at the street frontage.
- b. All plant materials used to satisfy requirements set forth herein shall be suitable for the climatic characteristics of Sumter (USDA Climate Zone 8). The recommended plant lists in Section 9.e.1 list species of plants that are suitable for the climate of

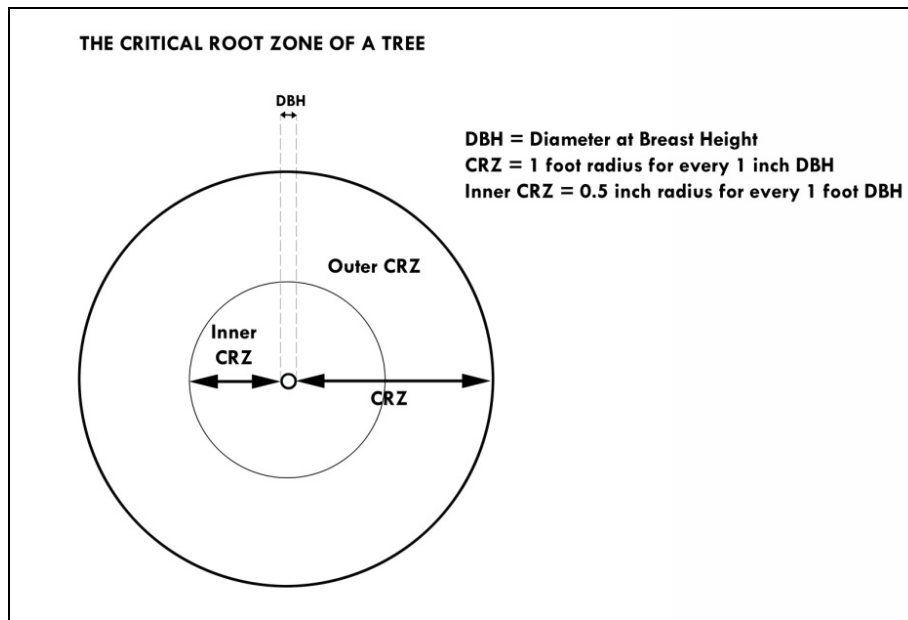
Sumter. All plans must cite the most recent recommendations of American Standards for Nursery Stock by the American Association of Nurserymen with regards to size standard, planting specifications and maintenance recommendations.

- c. Equal spacing of plant material shall not be required. Plant materials shall be grouped and clustered in order to present a more natural appearance. However, clusters of plant material shall be distributed equally throughout the landscaped areas.
- d. Existing trees may be counted as canopy or understory as set forth herein provided such trees are a minimum of two (2") inches in caliper, in good health and located in the approximate area as required herein. Invasive species shall not be counted toward existing trees.
- e. Parcels containing delineated wetlands (as determined by U.S. Army Corp of Engineers) which would normally require landscape buffers as determined in this Article shall be exempt from such required buffer provided the width of the delineated wetlands is a minimum of thirty (30) feet. If the adjacent wetlands should be mitigated and approved for development in the future, the required buffer shall be specified and installed at that time.
- f. No structures or portions of structures (except structures required in conjunction with public utility services and public transit, fences, or walls) shall be permitted in a required landscape buffer. Ingress and egress shall be permitted through required landscape buffers in accordance with Section 9.c.1.g..
- g. Adjacent commercial parcels shall provide pedestrian and bicycle connectivity when a buffer separates parcels. A minimum six (6) foot walkway shall be provided to allow pedestrian and bicycle access between parcels. This requirement shall be waived if there is a sidewalk at the street.

### **9.c.2. Definitions**

- a. Berms. Berms constructed to satisfy buffer requirements stated herein shall be physical barriers which screen incompatible land uses. If included in the landscape design, berms more than 24" in height shall be:
  - 1. Constructed with a maximum slope of one foot of rise to three feet of run (1:3).
  - 2. Have a minimum crown of six (6) feet in width.
  - 3. Have a maximum slope of 1:4 when greater than six feet in height, as measured from the exterior property line.
  - 4. Designed and constructed with an undulating appearance which mimics as much as is practicable a natural topographical feature of the site.

5. Substantially planted and covered with live vegetation. No berm shall consist entirely of turf grass, groundcover, mulch or similar material. If a berm is greater than 2 feet in height all trees shall be arranged so that they are planted within 2 vertical feet of the natural grade. The surface of the berm shall be planted according to Table 9-1 and Section 9.b.4. Berms functioning as part of a front bufferyard shall be planted using Type A landscaping.
  6. Fully installed, planted and stabilized prior to issuance of certificate of occupancy.
  7. Designed to prevent standing water or to impede the flow of storm water from adjacent properties.
  8. Free of structures, including fences, unless approved by the Planning Commission as part of the landscaping requirements for site development.
- b. Barricade. Protective fencing consisting of 2" x 4" posts with 1" x 4" rails or orange safety fence, for the purpose of tree preservation and to protect environmentally sensitive areas during construction.
  - c. Caliper. Tree caliper, or diameter, is measured six (6") inches above the ground for young and recently planted trees. Measurement of mature trees is based on Diameter at Breast Height (DBH).
  - d. Critical Root Zone (CRZ). Tree Protection Area. Calculated by 1 foot radius for every 1" DBH, or a 10' radius of the trunk of a tree, whichever is greater.





- e. Deciduous Plant. A plant that loses its leaves in winter.
- f. Diameter at Breast Height (DBH). The diameter of an existing tree, measured 4.5' from the ground level. For multi-stemmed varieties, add the individual stem widths to calculate DBH.
- g. Evergreen Plant. A plant that does not lose its leaves and remains green in the winter.
- h. Groundcover. Groundcover shall be grass, turf, sod, ivy, bulbs, potted flowers, and bedding plants. Pebbles, wood chips, bark, mulch, straw and similar materials, may be used in conjunction with groundcover to delineate planting beds, but in no instance shall such materials be used for the purpose of sidewalks, parking areas, or driveways. Areas dedicated for lawns shall be cleared of debris, graded level, and covered with sod, turf, or grass seed.
- i. Historic Tree. A tree measuring 30" DBH, except for Live Oaks which are considered historic at 24" DBH.
- j. Home Owners Association (HOA). A corporation formed for the purpose of marketing, managing, and selling of homes and lots in a residential subdivision. It grants the developer privileged voting rights in governing the association, while allowing the developer to exit financial and legal responsibility of the organization, typically by transferring ownership of the association to the homeowners after selling off a predetermined number of lots. Membership in the homeowners association by a residential buyer is typically a condition of purchase; a buyer isn't given an option to reject it.
- k. Irrigation System. A water distribution system that ensures that all plant materials and landscaped areas are watered on a regular basis. Irrigation shall not be installed to water inside retention areas or stormwater facilities.
- l. Land Disturbance Activity. Development projects involving earth moving, clearing, grading, ditching, tree removal, or other construction activities;
- m. Low Impact Development (LID). Low impact development is development that minimizes or eliminates pollutants in storm water through natural processes and maintaining pre-development hydrologic characteristics, such as: flow patterns, surface retention, and recharge rates. LID practices reduce urban impacts to receiving waters. This is achieved by: Designing sites (starting with the site layout, and the grading and compaction phases of construction) that disturb only the smallest area necessary; minimizing soil compaction and imperviousness; preserving natural drainages, vegetation, and buffer zones; and utilizing on-site, lot-sized storm water infiltration techniques that minimize pollutant transport and maximize on-site pollutant treatment.
- n. Palm trees. Palm species trees shall be used as an ornamental or decorative tree only

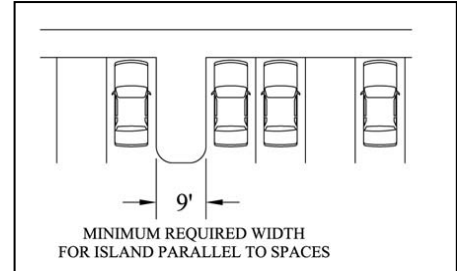
- (understory). Palm trees shall not be permitted to meet the minimum landscaping requirements (i.e. buffers, perimeter parking requirements, mitigation requirements, etc.).
- o. Pervious (permeable) Pavement. A paving system that allows water to move through the driving surface into the stone base below.
  - p. Significant Tree. A tree 10” in diameter or greater at DBH, except for Live Oaks which are considered significant at 8” DBH.
  - q. Shrubs.
    - 1. *Foundation/small* – shall be a minimum of three (3) gallons in size and 15” in height at the time of planting, and shall reach a minimum height of three (3) feet at maturity;
    - 2. *Tall* – shall be a minimum height of three (3) feet and width of two (2) feet at time of planting, and shall reach a minimum height of six (6) feet and width of four (4) feet at maturity.
  - r. Trees:
    - 1. *Canopy* – Any tree that reaches a mature height in excess of forty (40) feet. Canopy trees shall be a minimum of two (2) inches in caliper and seven (7) feet in height at the time of installation. Examples include oaks, hickories, maples, poplars, and others.
    - 2. *Understory* – Understory trees shall be a minimum of five (5) feet high and one and one-half inch in caliper, measured six inches above grade, when planted. When mature, an understory tree should be between fifteen (15) and forty (40) feet high. Examples include dogwoods, sourwoods, fruit trees, and others.
    - 3. *Evergreen* – A canopy tree that does not lose its leaves, remains green in winter, and typically reaches a minimum mature height of eight (8) feet.
  - s. Verge. A narrow strip of grass, plants, and sometimes also trees, located between the roadway curb, or road surface edge, and the boundary of a road or parking lot.
  - t. Walls and Fences. Walls and fences constructed to satisfy buffer requirements stated herein shall be placed in a linear, serpentine, or stepped alignment and shall be a minimum of five (5) feet in height, but shall not exceed eight (8) feet in height. Such walls and fences shall be solid, continuous structures made of brick, stone, stucco, concrete, wood, synthetic wood, or composite material. Other materials and colors may be approved by the Planning Department. The finished side of the fence shall be installed on the outside of the property.

### **9.c.3. Landscape Requirements for the Interior of Parking Areas**

- a. Parking areas shall contain landscape islands and peninsulas located in such a manner as to:

1. Divide and break up large expanses of paving.
2. Guide traffic flow and direction.
3. Promote pedestrian and vehicular safety.
4. Preserve existing trees and vegetation.
5. Provide shade and reduce heat island effect

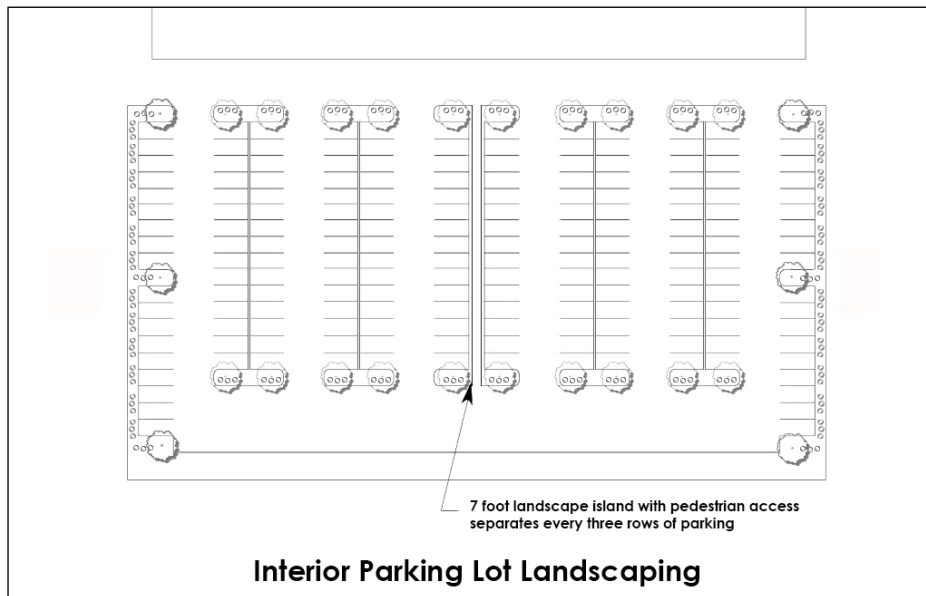
b. Parking lot perimeter landscaping shall be determined by Type A – D landscape buffers.



c. The minimum width for a landscape island or peninsula that is parallel to a parking space shall be nine (9') feet, and the minimum length for the same shall be seventeen (17') feet. Each landscape island or peninsula shall contain a minimum of one (1) canopy tree and three (3) shrubs. There shall be no more than 15 parking spaces between landscape islands.

d. Each end of each row of parking spaces shall require a landscape island unless the end of such row of parking spaces is adjacent to a perimeter landscape screen or border as required in Section 9.b.2.

e. In parking lots with five (5) or more rows of parking or 100 or more spaces, every third group of rows of parking spaces shall be separated from one another by a seven (7) foot wide landscape island with an integrated five (5) foot wide sidewalk that extends the entire length of the row of parking spaces. Such islands are to allow safe pedestrian access across the parking lot to the building, and shall have a one (1) foot sodded grass verge on either side of the sidewalk. Access to the sidewalk must be handicap accessible and designed in compliance with ANSI 117.1.



- f. The Zoning Administrator may consider reducing the width of a landscape island and the amount of plant materials by up to 50% if impervious surface reduction design methods, as described below in Section 9.c.4, are used in a parking area. Traditional curb and gutter may be replaced by wheel stops, or curb cuts may be implemented as part of a Low Impact Development (LID) grading system.

#### **9.c.4. Parking Lot Design for Impervious Surface Reduction.**

- a. Use minimum parking stall and ADA compliant dimensions.
- b. Use the most space-efficient stall configuration for the site.
- c. In larger commercial parking lots, design thirty (30) percent of the spaces for compact cars only.
- d. Selection of pervious surface material shall be based on amount of automobile traffic and use.
- e. If soils are suitable, drain parking lot runoff into infiltration islands using curb cuts or flat curbs with ribbon edging and wheel stops. If existing soils are unsuitable for infiltration, excavate the infiltration area to a depth of three (3) feet and fill with a planting soil mix.
- f. Plant native perennials or grasses, or shrubs rather than turfgrass over as much of non-paved surfaces as possible.
- g. Use other best engineering practices for LID.

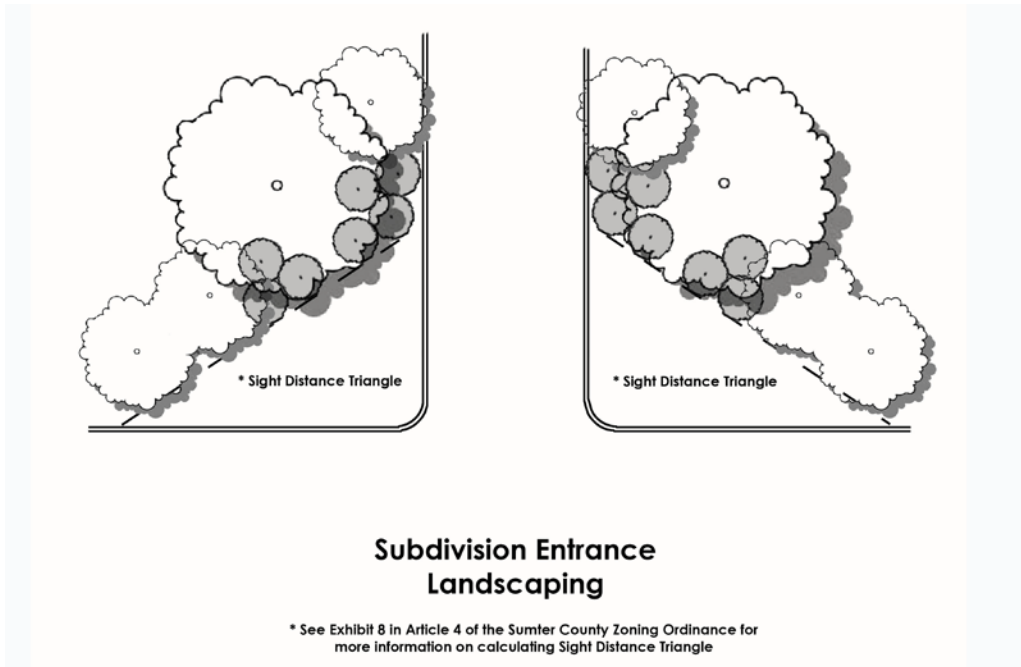
#### **9.c.5. Stormwater Facility Landscape Requirements**

- a. Native plants and selected non-native plants shall be required in and around stormwater facilities. The plant species selected shall be those which are commonly known to flourish in wetland or stormwater areas. Non-native species shall be approved on a case by case basis and shall be proven non-invasive species.
  - 1. A minimum of one (1) canopy tree shall be required per four thousand (4,000) square feet of stormwater area.
  - 2. 70% of the disturbed area and slopes of a stormwater area, excluding any area intended to be wet at all times, shall be planted with perennial cover (grasses, shrubs, perennials) of either native or approved non-native plants. A combination of coir fabric and seed mix is acceptable as long as all slopes greater than 8% are completely covered.
- b. No trees shall be planted on dams, stormwater area slopes or fill dirt areas, or anywhere that they may compromise the integrity of the storm water engineering system.

- c. Native plants are not required in swales located in turfgrass areas or lawns.
- d. Stormwater facilities shall be located at the rear or sides of a development site where practicable. Chain link fencing is permitted around stormwater facilities only if located in the rear of a site or when the public health, safety, and welfare makes placement of fencing necessary. Fencing must be green or black chain link.
- e. All stormwater management facilities must be screened completely by Type B landscaping.

**9.c.6. Residential Subdivision Development**

- a. Entrance Plantings for Subdivisions. All entrances to subdivisions shall be planted with a minimum of two (2) canopy trees, six (6) understory trees, fourteen (14) shrubs. Trees must be placed outside of the sight-distance triangle area of the intersection. Deciduous plants and smaller landscape material (i.e. perennials, groundcovers) may be used in addition to the required planting.



- b. Subdivision Front Bufferyard (Street Landscaping) Requirements. A subdivision must choose from the following street landscaping types:
  1. Heavy Landscaping. Front bufferyard shall meet the standards of type D landscaping, without a fence, as described in Section 9.b.4. Minimum bufferyard width 20 feet.
  2. Berms. Shall meet the standards as described in Section 9.c.2.a. minimum

bufferyard width 20 feet.

3. Walls. Shall be constructed of brick, stucco or stone, with a minimum height of six (6) feet and with plantings between the wall and the street that meet the standards of type A landscaping as described in Section 9.b.4. minimum bufferyard width 10 feet.

- c. Side Bufferyard Requirements. Side bufferyards shall be consistent with Table 9-1 and Section 9.b.4. of this ordinance, in the Landscaping and Buffer Requirements section.

Bufferyards shall be located on commonly owned open space controlled by an approved Home Owners Association (HOA). Said organization shall be responsible for maintenance and upkeep of all required buffers.

- d. Interior Street Tree Requirements. All individual lots within a subdivision shall have at least one tree located within ten (10) feet of the front property line. Such street trees shall meet the minimum requirements for canopy trees as set forth in Section 9.d.2, provided however in instances where such trees would interfere with underground utilities or overhead utility services, tree types of a more appropriate species may be permitted. The following factors shall be considered in determining the type of trees installed and the placement of trees:

1. Proximity of overhead and underground utility services;
2. Driveway and street intersection sight triangles;
3. Estimated mature height, root development, and canopy shape and size of trees;
4. As an alternative to the above requirements, a developer may submit a master streetscape plan for the development. The total number of trees in the master streetscape plan must be at least equivalent to placing trees in the public right of way at fifty feet (50') intervals on both sides of the street. The master streetscape plan shall be reviewed and approved by the Zoning Administrator as part of the preliminary plan submission, and must meet the minimum requirements stated in Article 9, Section D.

## **SECTION D: LANDSCAPE MATERIALS AND MAINTENANCE**

### **9.d.1. Landscape Plan Submittal Requirements**

- a. Two (2) copies and a digital copy (PDF or JPG) of the proposed landscape plans shall be submitted for zoning compliance.
- b. The landscape plan shall be drawn to scale and shall illustrate the following information:

1. Scale, date and north arrow;
2. Location and labels for all proposed vegetation, including a legend;
3. Planting and installation details for proposed plant materials.
4. Location labels of existing vegetation and trees to be saved;
5. Methods and details for the protection of existing vegetation;
6. Location and specifications for proposed fences, walls, and berms – plans shall include a scaled cross section of any proposed berms;
7. Plant list or schedule with the botanical and common name, quantity, spacing and size of all proposed materials at the time of installation;
8. Provide a tree legend with existing trees, and all significant and historic trees.
9. Location of all existing and proposed structures, paved areas, landscape islands, and sidewalks;
10. Location and specification of proposed irrigated areas;
11. Location and specifications for dumpster pads;
12. List adjacent land uses and zoning districts of adjacent properties.
13. Location of environmental conditions such as creeks, wetlands, floodplain areas, Carolina bays or any other environmental features of note.

**9.d.2. Plant Material and Irrigation Requirements:**

- a. All plant materials used in a landscape plan must meet the following minimum standards at time of planting:
  1. Canopy Trees must be a minimum of 2 inch caliper with a minimum height of 7 feet.
  2. Understory Trees must be a minimum of 1 ½ inch caliper with a minimum height of 5 feet.
  3. Evergreen Trees must be a minimum height of 5 feet.
  4. Multi-stemmed specimens shall be calculated by adding the calipers of individual stems. The cumulative caliper for any multi-stemmed specimen must be a minimum of 1 ½ inches.

5. "Tall Shrubs" as specified for bufferyards shall be a minimum height of three (3) feet and width of two (2) feet at time of installation and shall reach a minimum mature height of six (6) feet and width of four (4) feet. The tall shrubs used in a buffer shall be predominantly evergreen, no more than one in ten of the shrubs used in a bufferyard may be deciduous.
  6. Foundation/small shrubs shall be 15" when planted; 36" in height at maturity.
  7. Any deviations from these minimum standards must reference the most updated version of the American Nursery and Landscaping Association's publication American Standards for Nursery Stock (ANSI) for plant material standards.
  8. Rootbound, damaged, diseased or otherwise inferior plant material shall be replaced before final zoning approval is given.
  9. All plantings shall be installed according to ANLA's American Standards for Nursery Stock (ANSI) recommendations.
- b. All landscape areas shall be required to have an irrigation system (see definition, 9.c.2.k) that provides coverage to all plant materials. All components of irrigation systems shall be maintained in proper working order.

### **9.d.3. Tree Preservation**

- a. Existing trees may be used to satisfy requirements stated herein. Site plans shall be designed to preserve existing vegetation.

Existing trees provide immediate shade, clean the air and add aesthetic and economic value. Trenching, placing backfill, driving or parking equipment in the CRZ area, and dumping of oil, trash, paint or other materials detrimental to plant health in close proximity to protected trees is prohibited;

- b. Tree Survey/Tree Protection Plan: A tree survey and tree protection plan is required in all areas to be developed, including any development activity in residentially zoned districts in the City. The survey shall include the species and location of all significant and historic trees. A tree protection plan shall be drawn to scale and submitted as part of a landscape plan, site plan, preliminary subdivision plan, when seeking a land disturbance permit, or filed separately. Components shall include:
  1. Footprint or proposed footprint of any building(s) or structure(s);
  2. Areas of clearing, grading, trenching, and other earth moving activities;
  3. Significant and historic trees in area(s) to be developed, with barricades around CRZ of trees shown on plan;



4. Areas to be protected during development are not required to show individual significant or historic trees, as long as the entire area is contained by a barricade and is indicated on the tree protection plan;
5. Ponds, creeks, wetlands, floodplain areas, Carolina bays and other natural features shall be protected by silt fencing or other methods that ensure their protection from erosion and disturbance during development activities. The developer is responsible for coordinating with the U.S. Army Corps of Engineers to obtain necessary permits for areas determined to be jurisdictional and under their purview.
6. Areas of planned remediation for significant and/or historic trees to be removed shall be indicated on the submitted landscape plan;
7. Existing trees may be counted in meeting the number of required trees for street landscaping and buffers. To be counted, a tree must have a tree diameter at breast height (DBH) of two inches.
8. Significant Trees (per Table 9-2) may be removed during land disturbance and/or construction only if the landscape plan mitigates each tree's removal with the addition of two (2) replacement trees of an equivalent species that will grow to an equal size at maturity. Replacement trees shall meet the minimum planting specifications of this ordinance at the time of planting. Replacement trees shall not count towards buffering, street tree or other landscape planting requirements.
9. In parking lots, curb and gutter systems shall be installed around the CRZ of existing trees to maintain a protective area after construction. Soil amendments and mulch shall be applied to refill areas where soil removal and root pruning have taken place;
10. Permeable paving, asphalt or concrete as well as tree grates, structural soils, and other engineered products which allow water to penetrate the soil underneath the tree are permitted within the outer CRZ area. Sidewalks and other hardscape elements with permeable qualities are permitted in outer CRZ areas. When installing such elements, tree roots shall be pruned with clean cuts at the edge of the disturbed area and shall not compromise more than 25% of the outer CRZ area. No fill shall be placed above grade, and no disturbance, parking of heavy machinery or planting is permitted within the Inner CRZ area of a tree. (See graphic entitled "Critical Root Zone of a Tree" in definitions Section 9.c.2)
11. No planting other than groundcover is to occur within the outer CRZ of an existing significant and/or historic tree being retained on site;
12. Trees and undergrowth in designated open space in an approved plan shall remain undisturbed except as indicated on an approved plan. Removal of any dead and dying plant, or any plant currently listed on the USDA Invasive and Noxious Weed List is permitted;

**Table 9-2 Significant and Historic Trees**

The following trees are considered significant or historic, depending on size as indicated. A mature tree not on this list may qualify as significant or historic. Any tree in good health, regardless of species, that is greater than 30” DBH will be considered a **Historic Tree** and cannot be removed.

Latin Name:	Common Name:	DBH for Significant:	DBH for Historic:
<i>Acer rubrum</i>	Red Maple	10”	30”
<i>Carya illinoensis</i>	Pecan	10”	30”
<i>Cedrus deodora</i>	Deodar Cedar	10”	30”
<i>Celtis occidentalis</i>	Hackberry	10”	30”
<i>Fagus grandifolia</i>	Beech	10”	30”
<i>Ginkgo biloba</i>	Ginkgo	10”	30”
<i>Juglans nigra</i>	Black Walnut	10”	30”
<i>Liriodendron tulipifera</i>	Tulip Poplar	10”	30”
<i>Magnolia grandiflora</i>	Southern Magnolia	10”	30”
<i>Nyssa sylvatica</i>	Tupelo	10”	30”
<i>Quercus virginiana</i>	Live Oak	8”	24”
<i>Quercus spp.</i>	All other large oaks	10”	30”
<i>Pinus palustris</i>	Longleaf Pine	10”	30”
<i>Ulmus Americana</i>	American Elm	10”	30”
<i>Ulmus parviflora</i>	Chinese Elm	10”	30”
<i>Taxodium distichum</i>	Bald Cypress	10”	30”

- c. A Land Disturbance Permit shall be required for all major subdivisions, commercial and industrial projects occupying undeveloped and/or developed property, or portions thereof.
  - 1. Owner occupied individual residential properties and on-going farm operations are expressly excluded from the provisions herein;
  - 2. An application for a Land Disturbance Permit shall be available from the Planning Department. The issuance of a Land Disturbance Permit is contingent upon the approval of a Tree Protection Plan except in single-family or duplex residential parcels;
- d. Tree Removal: A permit shall be required for the removal or destruction of a significant or historic tree or trees. A permit may be issued by the Zoning Administrator if it meets the following criteria:
  - 1. The significant and/or historic tree(s) to be removed is dead, diseased, irreparably damaged, hazardous or creating or potentially creating damage to the property or injury to person;

2. An approved landscape plan and tree protection plan have been approved pursuant to this ordinance;
3. Any tree in good health that is greater than 30” DBH will be considered a **Historic Tree** and cannot be removed without a signed letter from a licensed arborist, stating that the tree is dead, diseased, irreparably damaged, hazardous or creating or potentially creating damage to the property or injury to person;
4. No person, firm, organization, society, association or corporation, or any agent or representative thereof shall directly or indirectly destroy or remove any significant or historic tree situated on property under the jurisdiction of this Section without a *Land Disturbance Permit*. **A permit for tree removal is not required for trees on established single family or duplex residential parcels;**
5. It is Council’s intent that this Ordinance not render any parcel impractical for its permitted or conditionally allowed uses. In instances where an Historic Tree must be removed because the historic tree is located within a proposed building footprint, street, road, driveway, drainage way, or parking area and no other reasonable design or economically reasonable alternative exists to save the tree, removal shall be mitigated by the planting of two (2) recommended trees of an equivalent species to the tree(s) being removed.

#### **9.d.4. Replacement of Dead, Dying, and Damaged Vegetation.**

- a. The damage, failure to thrive, and/or intentional removal of any landscaped area or vegetation required by this section shall constitute a violation of the Zoning Ordinance. All disturbed landscaped areas and vegetation shall be replanted in accordance with the approved landscape plan or in accordance with an agreed upon mitigation plan approved by the Zoning Administrator.
- b. Upon notification by the Zoning Administrator, dead or dying plant materials required by an approved landscape/buffering plan shall be replaced by the current property owner(s) or legally responsible party. Failure to act within 30 days of notice by the Zoning Administrator will constitute a zoning violation.
- c. **Emergencies:** In the case of emergencies such as windstorms, ice storms, fire, or other disasters, the Zoning Administrator may waive the requirements of this ordinance during the emergency period so that the requirements of this ordinance will in no way hamper work to restore order. This shall not be interpreted as a general waiver of the intent of this ordinance. A period of one year shall be granted following such an emergency, for the requirements of the ordinance to be met;

**9.d.5. Revisions to Approved Plans:** Due to seasonal planting problems and/or lack of plant availability, approved landscape plans may require minor revisions. In instances where planting is delayed by weather or other factors, a written request for planting extensions shall be provided to the Zoning Administrator indicating a finite date for final installation. Minor revisions to

planting plans may be approved by the Zoning Administrator so long as the plan does not violate any part of this ordinance.

**9.d.6. Waivers:** A waiver of the landscaping requirements may be requested of the Zoning Administrator. The waiver request shall be in writing and include a detailed justification in support of the request. Waiver requests shall be judged on their ability to provide an alternative design which meets the public purpose to at least an equivalent degree.

**SECTION E: RECOMMENDED PLANTS**

**9.e.1. Recommended Trees:** The following list contains those plant materials which are native to the Sumter area or have been determined to be suitable for the climate of the Sumter area. Applicants seeking landscape plan approval are encouraged but not required to select plant materials from the following plant list. The Zoning Administrator may consult an arborist, the South Carolina Urban Tree Species Guide, SCDOT Tree Guide, or any other industry recognized source for more information.

**Table 9-3 Canopy Trees:**

<b>Common/Scientific Name</b>	<b>Height and Width</b>	<b>Sun and Shade</b>
Ash, green/ <i>Fraxinus pennsylvanica</i>	60-70' h/45' w	FS
Beech, American/ <i>Fagus grandifolia</i>	50-75' h/40-80' w	PS/FS
Birch, River/ <i>Betula nigra</i>	40-70' h/25-45' w	PS/FS
Blackgum/ <i>Nyssa sylvatica</i>	65-75' h/25-35' w	PS/FS
Deodar Cedar/ <i>Cedrus deodara</i>	40-60' h/25-30' w	PS/FS
Cryptomeria, Japanese/ <i>Cryptomeria japonica</i>	50-60' h/15-20' w	FS
Cypress, bald/ <i>Taxodium distichum</i>	60-80' h/25-35' w	FS/PS
Cypress, pond/ <i>Taxodium ascendens</i>	50-60' h/50-60' w	PS/FS
Dawn redwood/ <i>Metasequoia glyptostroboides</i>	70-90'h/25-35' w	FS/PS
Ginkgo/ <i>Ginkgo biloba</i>	50-75' h/50-60' w	PS/FS
Hackberry/ <i>Celtis occidentalis</i>	40-60' h/30-50' w	FS
Hickory, pignut/ <i>Carya glabra</i>	50-65' h/30-40' w	PS/FS
Hickory, shagbark/ <i>Carya ovata</i>	60-80' h/25-35' w	PS/FS
Holly, American/ <i>Ilex opaca</i>	40-80' h/25-50' w	PS/FS
Hophornbeam, American/ <i>Ostrya virginiana</i>	40-50' h/25-35' w	PS/FS
Hornbeam, European/ <i>Carpinus betulus</i>	40-50' h/15-20' w	PS
Katsura tree/ <i>Cercidiphyllum japonicum</i>	40-60' h/35-60' w	PS/FS
Loblolly bay/ <i>Gordonia lasianthus</i>	50-60' h/10-15' w	PS/FS
Magnolia, Southern/ <i>Magnolia grandiflora</i> 'Claudia Wannamaker'	60-80' h/30-40' w	PS/FS
Magnolia, Southern/ <i>Magnolia grandiflora</i> 'Bracken's Brown Beauty'	40-50'h/15-30' w	FS
Maple, red/ <i>Acer rubrum</i>	60-75 'h/25-35' w	PS/FS

Maple, sugar/ <i>Acer saccharum</i>	50-80' h/35-50' w	S/FS
Oak, Chinese evergreen/ <i>Quercus myrsinifolia</i>	30-50' h/20-30' w	FS
Oak, laurel/darlington/ <i>Quercus laurifolia</i>	60-70' h/50' w	PS/FS
Oak, live/ <i>Quercus virginiana</i>	60-80' h/60-120' w	PS/FS
Oak, nuttall/ <i>Quercus nuttallii</i>	40-60' h/25-40' w	FS
Oak, overcup/ <i>Quercus lyrata</i>	40-50' h/35-50' w	FS
Oak, shumard/ <i>Quercus shumardii</i>	60-80' h/40-50' w	FS
Oak, southern red/ <i>Quercus falcata</i>	60-80' h/60-70' w	FS
Oak, willow/ <i>Quercus phellos</i>	70-80' h/35-50' w	FS
Oak, swamp chestnut/ <i>Quercus michauxii</i>	60-70' h/30-50' w	PS/FS
Oak, white/ <i>Quercus alba</i>	60-100' h/60-80' w	PS/FS
Pine, loblolly/ <i>Pinus taeda</i>	50-80' h/30' w	FS
Pine, longleaf/ <i>Pinus palustris</i>	60-80' h/30-40' w	FS
Redcedar, eastern/ <i>Juniperus virginiana</i>	40-50' h/8-25' w	FS
Sassafras/ <i>Sassafras albidum</i>	40-60' h/25-40' w	PS/FS
Sweetgum/ <i>Liquidambar styraciflua</i>	75' h/50' w	PS/FS
Sycamore, American/ <i>Platanus occidentalis</i>	75-90' h/60-70' w	FS
Tulip poplar/ <i>Liriodendron tulipifera</i>	80-120' h/25-40' w	FS
Yellowwood, American/ <i>Cladrastis kentukea</i>	40-50' h/40-50' w	PS/FS
Zelkova, Japanese/ <i>Zelkova serrata</i>	50-90' h/50-75' w	FS

FS=Full Sun PS= Part Sun S= Shade

**Table 9-4 Understory Trees:**

<b>Common/Scientific Name</b>	<b>Height and Width</b>	<b>Sun and Shade</b>
Buckeye, red/ <i>Aesculus pavia</i>	15-20' h/15-25' w	S/FS
Chastetree/ <i>Vitex agnus-castus</i>	10-15' h/15-20' w	PS/FS
Chastetree, cutleaf/ <i>Vitex negundo- 'Heterophylla'</i>	10-15' h/10-15' w	PS/FS
Crapemyrtle/ <i>Lagerstroemia indica</i>	15-30' h/15-25' w	FS
Crapemyrtle, Japanese/ <i>Lagerstroemia fauriei</i>	35-50' h/25-35' w	FS
Cherry, Okame/ <i>Prunus x incamp 'Okame'</i>	15-25' h/20' w	PS/FS
Dogwood, flowering/ <i>Cornus florida</i>	20-30' h/20' w	PS
Dogwood, Japanese/ <i>Cornus officinalis</i>	20' h/25' w	PS/FS
Dogwood, kousa/ <i>Cornus kousa</i>	15-20' h/15-20' w	PS/FS
Dogwood, pagoda/ <i>Cornus alternifolia</i>	15-20' h/15-20' w	PS/FS
Fringetree/ <i>Chionanthus virginicus</i>	12-15' h/10-15' w	PS/FS
Fringetree, Chinese/ <i>Chionanthus retusus</i>	20' h/10-15' w	PS/FS
Hornbeam, American/ <i>Carpinus caroliniana</i>	20-40' h/20-30' w	PS
Loquat/ <i>Eriobotrya japonica</i>	20-30' h/30-35' w	PS/FS
Maple, amur/ <i>Acer ginnala</i>	15-20' h/15-20' w	PS/FS
Magnolia, star/ <i>Magnolia stellata</i>	15-20' h/10-15' w	PS/FS
Magnolia, Southern/ <i>Magnolia grandiflora</i> 'Little Gem'	20-25' h/10-15' w	PS/FS

Magnolia, sweetbay/ <i>Magnolia virginiana</i>	30-40' h/15-25' w	PS
Maple, hedge/ <i>Acer campestre</i>	30-35' h/30-35' w/	PS/FS
Maple, trident/ <i>Acer buergerianum</i>	30-40' h/25' w	PS/FS
Palm, pindo/ <i>Butia capitata</i>	15-25' h/10-15' w	PS/FS
Persian parrotia/ <i>Parrotia persica</i>	20-40' h/20-40' w	PS/FS
Pistache, Chinese/ <i>Pistacia chinensis</i>	25-35' h/25-35' w	FS/PS
Redbud, Chinese/ <i>Cercis chinensis</i>	10-15' h/6-10' w	PS/FS
Redbud, eastern/ <i>Cercis canadensis</i>	20-30' h/15-30' w	PS
Silverbell, Carolina/ <i>Halesia Carolina</i>	20-40' h/15-30' w	PS/FS
Snowbell, Japanese/ <i>Styrax japonicus</i>	20-30' h/15-25' w	PS/FS
Stewartia, tall/ <i>Stewartia monadelphica</i>	25-35' h/15-25' w	PS/FS
Waxmyrtle/ <i>Myrica cerifera</i>	15-20' h/20-25' w	PS/FS

FS=Full Sun PS= Part Sun S= Shade

**Table 9-5 Evergreen Trees:** The following list consists of trees that are evergreen and perform well as screens in this climate. This is not an exhaustive list, there may be species acceptable for this use that are not listed here, this is just meant as a general guideline for the type of plants recommended for this purpose.

Common/Scientific Name	Height and Width
Japanese Cryptomeria/ <i>Cryptomeria japonica</i>	50-60' h/20-30' w
'Emily Bruner' Holly/ <i>Ilex cassine</i>	20-30' h/8-15' w
'Nellie R. Stevens' Holly/ <i>Ilex cornuta</i>	20-30' h/10-12' w
'Mary Nell' Holly/ <i>Ilex latifolia</i>	20-25' h/8-14' w
American Holly/ <i>Ilex opaca</i>	40-50' h/20-40' w
Foster's & Savannah Holly/ <i>Ilex x. attenuata</i>	20-30' h/10-12' w
Weeping Yaupon Holly/ <i>Ilex vomitoria</i>	20-30' h/6-12' w
'Emily Bruner' Holly/ <i>Ilex x. Maserveae</i>	18-30' h/8-15' w
Eastern Red Cedar/ <i>Juniperus virginiana</i>	40-50' h/8-20' w
Southern Magnolia/ <i>Magnolia grandiflora</i>	60-80' h/30-50' w
'Little Gem' Magnolia/ <i>Magnolia grandiflora</i>	18-30' h/8-15' w
Sweetbay Magnolia/ <i>Magnolia virginiana</i>	18-30' h/15-25' w
Longleaf Pine/ <i>Pinus palustris</i> *	60-80' h/20-40' w
Loblolly Pine/ <i>Pinus taeda</i> *	60-80' h/20-40' w
Live Oak/ <i>Quercus virginiana</i>	40-80' h/60-100' w
Leyland Cypress/x. <i>Cupressocyparis Leylandii</i>	60-70' h/15-25' w
Redcedar, eastern/ <i>Juniperus virginiana</i>	40-50' h/8-25' w

\* Very tall and spindly at maturity, needs other plantings underneath to form a screen

**Table 9-6 Tall Shrubs:** The following list consists of tall shrubs (greater than six (6) feet in height at maturity) that are evergreen and perform well as screens in this climate. This is not an exhaustive list, there may be species acceptable for this use that are not listed here, this is just meant as a general guideline for the type of plants recommended for this purpose.

<b>Common/Scientific Name</b>	<b>Height and Width</b>
Camellia/ <i>Camellia japonica</i>	10-15' h/6-10' w
Sasanqua/ <i>Camellia sasanqua</i>	6-10' h/6-8' w
Loquat/ <i>Eriobotrya japonica</i>	15-25' h/15-25' w
Inkberry Holly/ <i>Ilex glabra</i>	6-8' h/8-10' w
Foster's Holly/ <i>Ilex x attenuate 'Fosteri'</i>	15-25' h/8-12' w
Yaupon Holly/ <i>Ilex vomitoria</i>	15-20' h/8-15' w
Florida Anise/ <i>Illicium floridanum</i>	6-10' h/6-8' w
Hollywood Juniper/ <i>Juniperus chinensis 'Torulosa'</i>	10-15' h/10-15' w
Japanese Ligustrum/ <i>Ligustrum japonicum*</i>	6-12' h/6-10' w
Loropetalum/ <i>Loropetalum chinense</i>	6-10' h/6-10' w
Banana Shrub/ <i>Michelia figo</i>	6-15' h/6-15' w
Wax Myrtle/ <i>Myrica cerifera</i>	10-15' h/10-15' w
Tea Olive/ <i>Osmanthus heterophyllus</i> (also <i>O. fragrans</i> , <i>O. x serrulata</i> )	8-20' h/8-12' w
Pittosporum/ <i>Pittosporum tobira**</i>	10-15' h/15-20' w
Podocarpus Yew/ <i>Podocarpus macrophyllus</i>	15-35' h/10-18' w
Cleyera/ <i>Ternstroemia gymnanthera**</i>	6-10' h/6-8' w
Waxmyrtle/ <i>Myrica cerifera</i>	15-20' h/20-25' w
Awabuki 'Chindo' Viburnum/ <i>Viburnum awabuki</i>	15-20' h/10-15' w

\* Chinese Privet/*L. sinense* is a noxious, invasive weed and is not permitted.

\*\* Prefer shade

**Table 9-7 Poor Performers:** The following trees are considered poor performers and are not permitted for use in landscaping applications:

<b>Common Name</b>	<b>Scientific Name</b>
Maple, Norway	<i>Acer platanoides</i>
Maple, Silver	<i>Acer saccharinum</i>
Catalpa	<i>Catalpa speciosa</i>
Honeylocust	<i>Gleditsia triacanthos</i>
Eastern White Pine	<i>Pinus strobes</i>
Bradford Pear	<i>Pyrus calleryana 'Bradford'</i>
Scarlet Oak	<i>Quercus coccinea</i>
Siberian Elm	<i>Ulmus pumila</i>

**Table 9-8 Invasive Species:** No invasive species (shown below) will be allowed in the City of Sumter. Any plant not listed below but included on the USDA Noxious and Invasive Plant List will also be considered an invasive plant.

<b>Common Name</b>	<b>Scientific Name</b>
Tree-of-Heaven	<i>Ailanthus altissima</i>
Garlic Mustard	<i>Alliaria petiolata</i>
Mimosa	<i>Albizia julibrissin</i>
Downy Brome	<i>Bromus tectorum</i>
Musk Thistle	<i>Carduus nutans</i>
Oriental Bittersweet	<i>Celastrus orbiculatus</i>
Purple Star Thistle	<i>Centaurea calcitrapa</i>
Diffuse Knapweed	<i>Centaurea diffusa</i>
Yellow Star Thistle	<i>Centaurea solstitialis</i>
Spotted Knapweed	<i>Centaurea stoebe</i>
Canada Thistle	<i>Cirsium arvense</i>
Houndstongue	<i>Cynoglossum officinale</i>
Scotch Broom	<i>Cytisus scoparius</i>
Air Potato	<i>Dioscorea bulbifera</i>
Common Teasel	<i>Dipsacus fullonum</i>
Russian Olive	<i>Elaeagnus angustifolia</i>
Thorny Olive	<i>Elaeagnus pungens</i>
Autumn Olive	<i>Elaeagnus umbellata</i>
Quackgrass	<i>Elymus repens</i>
Leafy Spurge	<i>Euphorbia esula</i>
Japanese Knotweed	<i>Fallopia japonica</i>
Giant Hogweed	<i>Heracleum mantegazzianum</i>
St. Johnswort	<i>Hypericum perforatum</i>
Cogongrass	<i>Imperata cylindrica</i>
Hairy Whitetop	<i>Lepidium appelianum</i>
Whitetop	<i>Lepidium draba</i>
Dalmatian Toadflax	<i>Linaria dalmatica</i>
Chinese Privet	<i>Ligustrum sinense</i>
Yellow Toadflax	<i>Linaria vulgaris</i>
Japanese Honeysuckle	<i>Lonicera japonica</i>
Japanese Climbing Fern	<i>Lygodium japonicum</i>
Old World Climbing Fern	<i>Lygodium microphyllum</i>
Japanese Stilt Grass	<i>Microstegium vimineum</i>
Melaleuca	<i>Melaleuca quinquenervia</i>
Chinaberry	<i>Melia azedarach</i>
Mulberry	<i>Morus alba</i>
Scotch Thistle	<i>Onopordum acanthium</i>
Princess Tree	<i>Paulownia tomentosa</i>
Mile-A-Minute Weed	<i>Persicaria perfoliata</i>
Kudzu	<i>Pueraria montana var. lobata</i>
Fig Buttercup	<i>Ranunculus ficaria</i>
Russian Knapweed	<i>Rhaponticum repens</i>



Multiflora Rose	<i>Rosa multiflora</i>
Brazillian Peppertree	<i>Schinus terebinthifolius</i>
Tropical Soda Apple	<i>Solanum viarum</i>
Johnsongrass	<i>Sorghum halepense</i>
Japanese Spiraea	<i>Spiraea japonica</i>
Witchweed	<i>Striga asiatica</i>
Medusahead	<i>Taeniatherum caput-medusae</i>
Saltcedar	<i>Tamarix spp.</i>
Chinese Thallow	<i>Triadica sebifera</i>
Beach Vitex	<i>Vitex rotundifolia</i>

### 9.e.2. Recommended Native Plants for Retention Areas

- a. Native vegetation shall be planted in all retention areas other than swales, such as rain gardens (see Section 9.e). Native vegetation includes plants indigenous to South Carolina (Zone 8), which intercept rain water and are highly drought tolerant (see list below).

The following small to medium plants are all native and are tolerant of the fluctuating wet/dry conditions present in retention areas:

**Table 9-9 Native Plants:**

<i>Scientific Name</i>	<b>Common Name</b>	<b>Height</b>	<b>Comments</b>
<i>Amsonia hubrechtii</i>	Texas Bluestar	36"	Blue Flowers; Gorgeous Fall foliage
<i>Asclepias incarnata</i>	Milkweed	30"	Butterfly food source
<i>Aster novae angliae</i>	New England Aster	24"	Bird food source, drought tolerant
<i>Callicarpa Americana</i>	Beautyberry	42"	Gorgeous berries in Fall, nondescript at other times of year
<i>Carex stricta</i>	Tussock Sedge	12-36"	Clumping, grasslike
<i>Echinacea purpurea</i>	Purple Coneflower	24"	Bird & butterfly plant
<i>Chasmanthium latifolium</i>	Fish on a Pole	36"	Beautiful grass, year-round interest
<i>Coreopsis verticillata</i>	Coreopsis	24"	Yellow flowers; drought tolerant
<i>Eupatorium purpureum</i>	Joe-Pye Weed	24-60"	Dusty pink blooms; Dwarf varieties exist
<i>Itea virginica</i>	Virginia Sweetspire	36"	Deciduous; Great Fall color and spring blooms
<i>Muehlenbergia</i>	Muhly Grass	36-42"	Pink/Purple Flowering Grass
<i>Panicum virgatum</i>	Switch Grass	36"	Beautiful year-round in southeast
<i>Rudbeckia hirta</i>	Black-Eyed Susan	24"	Bird & butterfly plant
<i>Solidago rugosa</i>	Goldenrod	24-42"	Does not cause allergies

